

Appin. No. 10/724,948  
Docket No. GP-302434/GM2-0079

## REMARKS / ARGUMENTS

### Status of Claims

Claims 1-17 are pending in the application and stand rejected. Applicant has amended Claims 1, 5, 9, 14 and 17, and has added new Claims 18-19, leaving Claims 1-19 for consideration upon entry of the present Amendment.

Applicant respectfully submits that the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, that no new matter has been entered, and that the application is in condition for allowance.

### Rejections Under 35 U.S.C. §102(b)

Claims 1, 2, 7-14 and 16-17 stand rejected under 35 U.S.C. §102(b) as being anticipated by Iwasa et al. (U.S. Patent No. 5,565,117, hereinafter Iwasa).

Applicant traverses this rejection for the following reasons.

Applicant respectfully submits that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, *in a single prior art reference.*" *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (emphasis added). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the \*\*\* claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Furthermore, the single source must disclose all of the claimed elements "arranged as in the claim." *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 716, 223 U.S.P.Q. 1264, 1271 (Fed. Cir. 1984). Missing elements may not be supplied by the knowledge of one skilled in the art or the disclosure of another reference. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 780, 227 U.S.P.Q. 773, 777 (Fed. Cir. 1985).

Applicant has amended independent Claims 1 and 14 to now recite, inter alia,

"...the filler material comprising a *skeletal structure* having porous regions defined by *solidly connected ligaments*..."

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No new matter has been added as antecedent support may be found in the specification as originally filed, such as at Paragraph [0020] for example.

Dependent claims inherit all of the limitations of the respective parent claim.

In alleging anticipation, the Examiner remarks that Iwasa discloses each and every element of the claimed invention. Paper 03062005, page 2.

As amended, Applicant submits that Iwasa fails to disclose each and every element of the claimed invention.

In comparing Iwasa with the claimed invention, Applicant submits that Iwasa discloses a filler material 1 that is *a powdery mixture*, and does not disclose *a skeletal structure* having porous regions *defined by solidly connected ligaments*. Abstract, Column 3 lines 10-11. Furthermore, Applicant submits that Iwasa discloses *a powdery mixture having a contact resistance* between the metal workpieces and the powdery mixture (col. 2 lines 66-67), and therefore necessarily cannot disclose a skeletal structure having porous regions defined by *solidly connected ligaments*.

Since the powdery mixture of Iwasa is *a powder*, it necessarily follows that it also cannot be *a skeletal structure having porous regions defined by solidly connected ligaments*, as specifically claimed for in the instant invention.

Accordingly, Applicant submits that Iwasa does not disclose all of the claimed elements, including their claimed attributes, arranged as in the claim, and respectfully submits that absent anticipatory disclosure in Iwasa of each and every element of the claimed invention arranged as in the claim, Iwasa cannot be anticipatory.

Regarding Claim 14 Specifically

Applicant has further amended independent Claim 14 to now recite, inter alia, "... the filler material *capable of being crushed so as to increase its density*."

No new matter has been added as antecedent support may be found in the specification as originally filed, such as at Paragraph [0024] for example.

In alleging anticipation, the Examiner remarks that Iwasa discloses applying pressure to the workpiece so that the filler material is crushed. Paper 03062005, page 2.

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As amended, Applicant submits that Iwasa does not disclose the filler material *capable of being crushed so as to increase its density*.

In comparing Iwasa with the claimed invention, Applicant finds Iwasa to disclose a powdery mixture, but does not find Iwasa to disclose how the powdery mixture may be crushed *so as to increase its density*.

Applicant submits that merely applying a pressure to the powdery mixture is not necessarily the same as the filler material capable of being crushed so as to increase its density, as the applied pressure on the powdery mixture may simply result in reduced contact resistance and not increased density of the powdery mixture.

Accordingly, and without more disclosure, Applicant submits that Iwasa does not disclose all of the claimed elements, including their claimed attributes, arranged as in the claim, and respectfully submits that absent anticipatory disclosure in Iwasa of each and every element of the claimed invention arranged as in the claim, Iwasa simply cannot be anticipatory.

Regarding Claim 2 Specifically

Claim 2 recites, inter alia,

"...wherein *the filler material* has an initial density and after the pressure has been applied, *the filler material* has a final density, wherein *the final density is greater than the initial density*."

In alleging anticipation, the Examiner remarks that Iwasa discloses "the filler material inherently has an initial density and the final density." Paper 03062005, page 2. However, the Examiner does not state with specificity where in Iwasa there is disclosure of *the final density being greater than the initial density*, which is specifically claimed for in the instant invention, and Applicant finds Iwasa to be silent on this point.

Accordingly, Applicant submits that Iwasa does not disclose all of the claimed elements, including their claimed attributes, arranged as in the claim, and respectfully submits that absent anticipatory disclosure in Iwasa of each and every element of the claimed invention arranged as in the claim, Iwasa simply cannot be anticipatory.

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Regarding Claim 8 Specifically

Claim 8 recites, inter alia,

"...wherein the porous material includes *a honeycomb structure or a fibrous material.*"

In alleging anticipation, the Examiner remarks that Iwasa discloses "the filler material is *fibrous-like.*" Paper 03062005, page 2 (emphasis added).

In respectful disagreement with the Examiner, Applicant finds Iwasa to disclose the filler material 1 to be a *powdery mixture*, and therefore to be *powder-like* and not *fibrous-like*. According to *The American Heritage® Dictionary of the English Language, Fourth Edition Copyright © 2000 by Houghton Mifflin Company*, Applicant finds "fibrous" to mean "having, consisting of, or resembling fibers", which is consistent with Applicant's description in the specification. At column 2, lines 12-13, Applicant finds Iwasa to disclose *a powdery mixture* composed of *a metal powder* and *a metal oxide powder*, and to be absent any disclosure of the powdery mixture being *composed of, having, consisting of, or resembling, fibers*.

Accordingly, Applicant submits that Iwasa does not disclose all of the claimed elements, including their claimed attributes, arranged as in the claim, and respectfully submits that absent anticipatory disclosure in Iwasa of each and every element of the claimed invention arranged as in the claim, Iwasa simply cannot be anticipatory.

Regarding Claim 11 Specifically

Claim 11 recites, inter alia,

"...wherein joining is *at least one of brazing, gas metal arc welding, gas tungsten arc welding, plasma welding, electron beam welding and laser welding.*"

In alleging anticipation, the Examiner remarks that Iwasa discloses "the welding process is by *arc welding.*" Paper 03062005, page 2 (emphasis added).

In respectful disagreement with the Examiner, Applicant finds Iwasa to be specifically directed to, and to specifically disclose, *resistance welding*. Title, Abstract, Column 1 "Field of the Invention", Column 1 "Summary of the Invention", and at various sections within the "Detailed Description of the Preferred Embodiment". Applicant finds

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Iwasa to be directed to a *resistance welding* method that uses a powdery mixture having a contact resistance to cause a thermite reaction (column 2, lines 57-61), and to be absent any disclosure of *brazing, gas metal arc welding, gas tungsten arc welding, plasma welding, electron beam welding or laser welding*, and the Examiner has not stated with specificity where in Iwasa such disclosure may be found.

Accordingly, Applicant submits that Iwasa does not disclose all of the claimed elements, including their claimed attributes, arranged as in the claim, and respectfully submits that absent anticipatory disclosure in Iwasa of each and every element of the claimed invention arranged as in the claim, Iwasa simply cannot be anticipatory.

In view of the amendment and foregoing remarks, Applicant submits that Iwasa does not disclose each and every element of the claimed invention arranged as claimed and therefore cannot be anticipatory. Accordingly, Applicant respectfully submits that the Examiner's rejection under 35 U.S.C. §102(b) has been traversed, and requests that the Examiner reconsider and withdraw of this rejection.

#### **Rejections Under 35 U.S.C. §103(a)**

Claims 3-6 and 15 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Iwasa.

Applicant traverses these rejections for the following reasons.

Claims 3-6 depend from Claim 1, and Claim 15 depends from Claim 14.

Applicant has provided remarks above to traverse the rejections under 35 U.S.C. § 102, and respectfully submits that for at least these reasons, dependent Claims 3-6 and 15, which inherit all of the limitations of the respective parent claim, are patentable.

Additionally, Applicant respectfully submits that the obviousness rejection based on the References is improper as the References fail to teach or suggest each and every element of the instant invention. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). The Examiner must meet the burden of

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establishing that all elements of the invention are taught or suggested in the prior art.  
MPEP §2143.03.

Regarding Claim 4 Specifically

Claim 4 recites, inter alia,

"...wherein an initial density of the filler material is greater than or equal to 2% *and less than or equal to 50%.*"

In alleging obviousness, the Examiner remarks that "it would have been obvious to one of ordinary skill in the art to choose a material with *an initial density and a final density of a hundred percent*, since the entire filler would be compressed and allow fusion between both workpieces." Paper 03062005, page 3 (emphasis added).

In alleging obviousness, the Examiner has made remarks directed to an initial density of 100%, but has not stated with specificity where Iwasa teaches or suggests *an initial density of less than or equal to 50%*, which is specifically claimed for in the instant invention.

Applicant respectfully submits that all claim elements must be considered, and absent a teaching or suggestion of each and every element, a prima facie case of obviousness cannot be established.

Regarding Claim 5 Specifically

Applicant has amended Claim 5 to now recite, inter alia,

"...wherein, after the pressure is applied, *a final density* of the filler material is greater than or equal to 70% and *less than 100%.*"

No new matter has been added as antecedent support may be found in the specification as originally filed, such as at Paragraph [0024] for example.

In alleging obviousness, the Examiner remarks that "it would have been obvious to one of ordinary skill in the art to choose a material with *an initial density and a final density of a hundred percent*, since the entire filler would be compressed and allow fusion between both workpieces." Paper 03062005, page 3 (emphasis added).

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In a similar manner as discussed above with respect to Claim 4, Applicant submits that Iwasa does not teach or suggest *a final density of the filler material being less than 100%*.

Absent a teaching or suggestion of each and every element of the claimed invention, Applicant respectfully submits that a prima facie case of obviousness cannot be established.

In view of the foregoing, Applicant submits that Iwasa fails to teach or suggest each and every element of the claimed invention and discloses a substantially different invention from the claimed invention, and therefore cannot properly be used to establish a prima facie case of obviousness. Accordingly, Applicant respectfully requests reconsideration and withdrawal of all rejections under 35 U.S.C. §103(a), which Applicant considers to be traversed.

In light of the forgoing, Applicant respectfully submits that the Examiner's rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a) have been traversed, and respectfully requests that the Examiner reconsider and withdraw these rejections.

**Regarding New Claims 18-19**

Applicant has added new independent Claim 18, which is directed to similar subject matter as Claim 1, but with additional limitations. For at least the reasons set forth above, Applicant respectfully submits that Claim 18 is directed to allowable subject matter, and therefore requests notice of allowance thereof.

Applicant has added new dependent Claim 19, which is directed to similar subject matter as Claim 8, but absent language to a fibrous material. For at least the reasons set forth above, and more specifically in view of Iwasa being absent any disclosure, teaching or suggestion of the porous filler material comprising a honeycomb structure, Applicant respectfully submits that Claim 19 is directed to allowable subject matter, and therefore requests notice of allowance thereof.

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The Commissioner is hereby authorized to charge any additional fees that may be required for this amendment, or credit any overpayment, to Deposit Account No. 06-1130.

In the event that an extension of time is required, or may be required in addition to that requested in a petition for extension of time, the Commissioner is requested to grant a petition for that extension of time that is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to the above identified Deposit Account.

Respectfully submitted,

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